

2



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/922,591	08/03/2001	Harry V. Paul	114296-2061	7725
30734	7590	11/19/2004	EXAMINER	
BAKER + HOSTETLER LLP WASHINGTON SQUARE, SUITE 1100 1050 CONNECTICUT AVE. N.W. WASHINGTON, DC 20036-5304			KNOLL, CLIFFORD H	
			ART UNIT	PAPER NUMBER
			2112	

DATE MAILED: 11/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

8

Office Action Summary

Application No.

09/922,591

Applicant(s)

PAUL, HARRY V.

Examiner

Clifford H Knoll

Art Unit

2112

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,6-27 and 34-41 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1, 6-27, and 34-40 is/are rejected.
7) ☒ Claim(s) 41 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This Office Action is responsive to communication filed 9/28/04. Currently, claims 1, 6-27, and 34-41 are pending.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

1. *Claims 1 and 16 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.*

The "fibre channel ports on the second set of input/output modules" lacks antecedent basis in both claims.

Claim Rejections - 35 USC § 102

2. *Claims 1, 6-27, and 34-40 are rejected under 35 U.S.C. 102(e) as being anticipated by Carvey (US 6606656) with inherent features as evidenced by Dally (US 6370145).*

Regarding claim 1, Carvey discloses a fiber channel switch with a plurality of fabric switch modules forming at least one fabric switch to provide connections (e.g., col. 6, lines 7-9), and a backplane having connectors receiving a first

Art Unit: 2112

plurality of input/output modules and fabric switch modules and the first set of connections through the backplane between the first input/output modules and one of the fabric switch modules (e.g., col. 6, lines 3-6). Carvey directs attention to particular features of the backplane and does not expressly mention the plurality of input/output modules, however this feature is an inherent part of Carvey's invention; as taught by Dally. Dally teaches the plurality of input/output modules (col. 2, lines 60-64). Carvey relies on Dally to enable his disclosure of a fabric router network and incorporates Dally by reference (col. 4, lines 62-66). Therefore, the input/output modules taught by Dally are features of the fabric router network and are inherent to the invention of Carvey. Carvey also discloses a second backplane having a second plurality of fabric switch modules, and the inherent features of the fabric router network as taught by Dally. Dally inherently discloses having a second plurality of input/output modules (e.g., col. 2, lines 47-50). Finally, Carvey discloses a first connection between the second set of I/O modules and the first set of fabric switch modules to provide direct connections (e.g., col. 2, lines 30-34).

Regarding claim 6, Carvey also discloses the use of jumper plugs (e.g., col. 7, lines 62-65).

Regarding claim 7, Carvey also discloses providing up to 128 fiber channel ports (e.g., col. 2, lines 53-54).

Regarding claim 8, Carvey also discloses third and fourth backplanes having third and fourth sets of input/output modules (e.g., col. 5, lines 50-55).

Art Unit: 2112

Regarding claim 9, Carvey also discloses the inherent features of the fabric router network as taught by Dally. Dally discloses providing up to 256 fiber channel ports (e.g., col. 2, lines 53-54), a first connection between the second set of I/O modules and the first set of fabric switch modules to provide direct connections (e.g., col. 2, lines 30-34).

Regarding claim 10, Carvey also discloses the inherent features of the fabric router network as taught by Dally. Dally discloses having a 16x16 switch connectivity (e.g., col. 1, line 67).

Regarding claim 11, Carvey also discloses a logical arrangement of two switches (e.g., col. 5, lines 9-14).

Regarding claim 12, Carvey also discloses the inherent features of the fabric router network as taught by Dally. Dally discloses speeds of 1 Gb/s (e.g., col. 1, lines 30-33).

Regarding claim 13, Carvey also discloses the inherent features of the fabric router network as taught by Dally. Dally discloses where one fabric switch module is a redundant module (col. 6, lines 66-67).

Regarding claim 14, Carvey also discloses where the first set of connections is provided through backplane pins (e.g., col. 14, lines 7-9).

Regarding claim 15, Carvey also discloses the inherent features of the fabric router network as taught by Dally. Dally discloses the crossbar switch (e.g., col. 1, lines 65-67).

Regarding claim 16, Carvey discloses a chassis including: a plurality of fabric switch modules forming at least one switch to provide connections

Art Unit: 2112

between the fiber channel ports (e.g., col. 6, lines 7-9); and a backplane receiving the plurality of input/output modules and the fabric switch modules, the backplane having connectors to provide connectivity between the input/output modules and the fabric switch modules (e.g., col. 6, lines 3-6). Carvey directs attention to particular features of the backplane and does not expressly mention the plurality of input/output modules, however this feature is an inherent part of Carvey's invention; as taught by Dally. Dally teaches the plurality of input/output modules (col. 2, lines 60-64). Carvey relies on Dally to enable his disclosure of a fabric router network and incorporates Dally by reference (col. 4, lines 62-66). Therefore, the input/output modules taught by Dally are features of the fabric router network and are inherent to the invention of Carvey. Finally, Carvey discloses a first connection between the second set of I/O modules and the first set of fabric switch modules to provide direct connections (e.g., col. 2, lines 30-34).

Regarding claim 17, Carvey also discloses the inherent features of the fabric router network as taught by Dally. Dally discloses two sets of connections between each input/output module and the plurality of fabric switch modules (e.g., col. 6, lines 31-34).

Regarding claim 18, Carvey also discloses each fabric switch module provides two switches, each switch having one of said two sets of connections to the input/output modules (e.g., col. 5, line 10).

Regarding claim 19, Carvey also discloses the inherent features of the fabric router network as taught by Dally. Dally discloses wherein the fiber

Art Unit: 2112

channel switch is a single chassis providing up to 64 fiber channel ports (e.g., col. 2, lines 50-54).

Regarding claim 20, Carvey also discloses a plurality of loopback plugs for one of said two sets of connections (e.g., col. 15, lines 31-34).

Regarding claim 21, Carvey also discloses the inherent features of the fabric router network as taught by Dally. Dally discloses a second chassis to provide up to 128 fiber channel ports (e.g., col. 2, lines 50-54).

Regarding claim 22, Carvey also discloses the inherent features of the fabric router network as taught by Dally. Dally discloses wherein each fabric switch module provides one switch (e.g., col. 2, lines 8-10).

Regarding claim 23, Carvey also discloses the inherent features of the fabric router network as taught by Dally. Dally discloses wherein the connectors are configured to provide a first set of connections between the input/output modules and the fabric switch modules of the chassis and a second set of connections between input/output modules of the second chassis and the fabric switch modules of the chassis (e.g., col. 2, lines 50-53).

Regarding claim 24, Carvey also discloses wherein the second set of connections comprises a plurality of jumper plugs (e.g., col. 7, lines 62-65).

Regarding claim 25, Carvey also discloses the inherent features of the fabric router network as taught by Dally. Dally discloses three chassis to provide up to 256 fiber channel ports (e.g., col. 2, lines 53-54).

Art Unit: 2112

Regarding claim 26, Carvey also discloses wherein a plurality of connectors in each chassis are horizontal fabric switch connectors providing horizontal connectivity to the at least one switch (Figure 1).

Regarding claim 27, Carvey also discloses the inherent features of the fabric router network as taught by Dally. Dally discloses wherein the at least one switch in each chassis has one set of connections to the input/output modules of each chassis (e.g., col. 2, lines 1-3).

Regarding claim 34, Carvey discloses the plurality of fabric switch modules forming at least one fabric switch to provide connections (e.g., col. 6, lines 7-9), the hardwired connection between each input/output module and each switching module within a single chassis (e.g., col. 2, lines 28-30), a jumper connection leading from each input/output module and switching module to at least one jumper connection site which can be configured to connect input/output modules to switching modules in the same chassis (e.g., col. 7, lines 62-65). Carvey directs attention to particular features of the backplane and does not expressly mention the plurality of input/output modules, however this feature is an inherent part of Carvey's invention; as taught by Dally. Dally teaches the plurality of input/output modules (col. 2, lines 60-64). Carvey relies on Dally to enable his disclosure of a fabric router network and incorporates Dally by reference (col. 4, lines 62-66). Therefore, the input/output modules taught by Dally are features of the fabric router network and are inherent to the invention of Carvey. Carvey also discloses a second backplane having a second plurality of fabric switch modules, and the inherent features of the fabric router network as

Art Unit: 2112

taught by Dally. Dally inherently discloses having a second plurality of input/output modules (e.g., col. 2, lines 47-50).

Regarding claim 35, Carvey also discloses two connections exist between each input/output module and each switching module within the same chassis (e.g., col. 2, lines 38-41).

Regarding claim 36, Carvey also discloses where each of the switch modules is logically decoupled into two separate logical switches (e.g., col. 5, lines 9-14).

Regarding claims 37 and 38, Carvey also discloses two chassis, and the jumper connection sites are configured to connect each of the input/output modules of the one chassis with each of the switching modules of the other chassis (e.g., col. 2, lines 30-34).

Regarding claim 39, Carvey also discloses the four chassis with each module connected to all switching modules, and each switching module is connected to all modules (e.g., col. 5, lines 55-57).

Regarding claim 40, Carvey also discloses each switching module consists of two physical modules logically coupled together into a single logical switch (e.g., col. 5, lines 9-14).

Allowable Subject Matter

3. *Claim 41 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.*

The following is a statement of reasons for the indication of allowable subject matter: the particular structure of the various connections in the claimed limitations provides sufficient structure between the four chassis so that the switch is not anticipated by Carvey.

Response to Arguments

4. *Applicant's arguments filed 8/30/04 have been fully considered but they are not persuasive.*

Regarding claims 1 and 16, Applicant argues that Carvey does not provide the additional claimed feature of the amended claims; however, Carvey discloses precisely the feature of a direct connection from one chassis switch to the other chassis module as exemplified by the citation supra.

Therefore the rejection of the claims is maintained.

Art Unit: 2112

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clifford H Knoll whose telephone number is 571-272-3636. The examiner can normally be reached on M-F 0630-1500.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark H Rinehart can be reached on 571-272-3632. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



chk

Khanh Dang
Primary Examiner